The distinctive profile of risk factors of nasopharyngeal carcinoma in comparison with other head and neck cancer types.

ABSTRACT

Nasopharyngeal carcinoma (NPC) and other head and neck cancer (HNCA) types show a great epidemiological variation in different regions of the world. NPC has multifactorial etiology and many interacting risk factors are involved in NPC development mainly Epstein Barr virus (EBV). There is a need to scrutinize the complicated network of risk factors affecting NPC and how far they are different from that of other HNCA types.122 HNCA patients and 100 control subjects were studied in the region of the Middle East. Three types of HNCA were involved in our study, NPC, carcinoma of larynx (CL), and hypopharyngeal carcinoma (HPC). The risk factors studied were the level of EBV serum IgG and IgA antibodies measured by ELISA, age, sex, smoking, alcohol intake, histology, and family history of the disease.EBV serum level of IgG and IgA antibodies was higher in NPC than CL, HPC, and control groups ($p < 0.01$). NPC was associated with lymphoepithelioma (LE) tumors, males, regular alcohol intake, and regular smoking while CL and HPC were not ($p < 0.05$). CL and HPC were associated with SCC tumors ($p < 0.05$). Furthermore, NPC, unlike CL and HPC groups, was not affected by the positive family history of HNCA ($p > 0.05$). The serum levels of EBV IgG and IgA antibodies were higher in LE tumors, regular smokers, younger patients, and negative family history groups of NPC patients than SCC tumors, non-regular smokers, older patients and positive family history groups respectively ($p < 0.05$) while this was not found in the regular alcoholics ($p > 0.05$).It was concluded that risk factors of NPC deviate much from that of other HNCA. EBV, smoking, alcohol intake, LE tumors, male patient, and age > 54 years were hot risk factors of NPC while SCC and positive family history of the disease were not. Earlier incidence, smoking, LE tumors, and negative family history of the disease in NPC patients were associated much clearly with EBV. It is proposed that determining the correct risk factors of NPC is vital in assigning the correct risk groups of NPC which helps the early detection and screening of NPC.

Keyword: Head; Neck; Cancer types.